

R E M A R K S

The Office Action of January 12, 1999 and the references cited therein have been carefully reviewed, and in view of the foregoing amendments and following representations, reconsideration is respectfully requested.

On pages 2-4 of the Office Action, claims 1-15 are rejected as follows:

*Claims 8-11 are rejected under 35 U.S.C. § 102(b) as being unpatentable over Dornes et al.; and*

*Claims 12-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dornes et al. in view of Oyama.*

It is submitted that the present invention, as embodied by the amended claims, now clearly patentably distinguishes over the Dornes and Oyama references for the following reasons.

Claim 8 has been amended to require that each of the first and second mounting head sections moves in two directions which are perpendicular to each other. The first direction of the first mounting head section and the third direction of the second mounting head section are parallel to each other. Similarly, the second direction of the first mounting head section and the fourth direction of the second mounting head section are parallel to each other. In the present invention, the second direction of movement of the first mounting head section is not necessarily the same as the fourth direction of movement of the second head mounting section. Thus, the first mounting head section can mount a picked-up component on the board at the same time the

second head section is mounting a picked-up component on the board. And therefore, production rates can be significantly improved. Further, because the mounting head sections in the claimed arrangement are completely independently movable, they do not need to be located over the board.

**Dornes** discloses an apparatus which includes drive rods 22, 24 and drive ball screws 26, 28 which are all horizontal and extend parallel to one another. These elements are supported by plates 14, 16 which are disposed on opposite sides of the board mounting position. The rods and ball screws extend through and support aligned component picked-up and insertion heads 38, 40. Component pick-up stations 42, 44 are located on either side of a board mounting position.

Due to the construction of the Dornes apparatus, when one of the insertion heads is located over a picked-up station the other head is located over the workpiece. This is always the case because the insertion heads move along the same shafts and thus move in the same direction. Accordingly, the production rates achieved with the Dornes apparatus will be poor because only one insertion head can mount a component on the board in contrast to the present invention which allows two components to be mounted on the board at the same time. Also, in Dornes, the shafts are always located over the board thus making the board susceptible to becoming dirty due to falling dust or oil etc.

Accordingly, it is submitted that the Dornes apparatus does not disclose or suggest first and second mounting head sections which are capable of moving as set forth in independent claim 8.

Oyama is cited by the Examiner to teach suction nozzles in a component mounting apparatus. However, as demonstrated above, the Dornes reference does not teach Applicant's invention as is now claimed in independent claim 8. Therefore, the combination of Dornes and Oyama, as proposed by the Examiner, would also not teach or suggest Applicant's invention as defined in claim 8.

In view of the above, it is submitted that the present application is now clearly in condition for allowance. The Examiner therefore is requested to pass this case to issue.

In the event that the Examiner has any comments or suggestions of a nature necessary to place this case in condition for allowance, then the Examiner is requested to contact Applicant's undersigned attorney by telephone to promptly resolve any remaining matters.

Respectfully submitted,

Kanji HATA et al.

By: Michael S. Huppert  
Michael S. Huppert  
Registration No. 40,268  
Attorney for Applicants

MSH/kjf

WENDEROTH, LIND & PONACK, L.L.P.  
2033 "K" Street, N.W. Suite 800  
Washington, D.C. 20006  
Telephone (202) 721-8200  
Facsimile (202) 721-8250  
July 12, 1999